Date: Fri, 8 Jan 93 16:06:27 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #40
To: Info-Hams

Info-Hams Digest   Fri, 8 Jan 93   Volume 93 : Issue   40

Today's Topics:

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Fri, 8 Jan 1993 20:17:53 GMT
From: usc!cs.utexas.edu!asuvax!chnews!hfglobe!labelle@network.UCSD.EDU
Subject: Aluminum tubing availability?
To: info-hams@ucsd.edu

Is there a mail order source for al. tubing of the 6061/6063
variety used in commercial antennas?

George
WB6YZZ
Portland Oregon

Date: Fri, 8 Jan 1993 23:24:39 GMT
From: saimiri.primate.wisc.edu!sdd.hp.com!hpscit.sc.hp.com!hpuerca.atl.hp.com!jab@ames.arpa
Subject: Anybody want to talk about Clover?
To: info-hams@ucsd.edu

Is there a FAQ or reference list (articles, papers, hardware suppliers) for clover? That would be a good start.

Perhaps also a mailing list.

I am interested, as are others in my area. But as far as we can tell, it will be a $1k investment to get started. Is there more than one HW implementation?

I have heard much whining over 56k costs of $200-500. Granted that Clover is unique, but I would hope that we would be able to get the costs down to the "upper end DSP tnc" range. (Please feel free to inform me if it there currently)

Thanks in advance!

Alan Barrow km4ba | I've seen things you people wouldn't believe. Attack
jab@atl.hp.com | ships on fire off the shoulder of Orion. I watched
                   | C-beams glitter in the dark near the Tannhauser gate.
..!gatech!kd4nc! | All those moments will be lost in time -
        km4ba!alan | like tears in rain. Time to die.   Roy Batty

---

Date: 8 Jan 1993 21:02:50 GMT
From: sun-barr!news2me.EBay.Sun.COM!west.West.Sun.COM!l1-a!flloyd@ames.arpa
Subject: Collins R-388 receiver
To: info-hams@ucsd.edu

In article <1993Jan8.193047.6284@mlb.semi.harris.com>
RSUMPERL@JAGUAR.ESS.HARRIS.COM (05991 SUMPERL RP) writes:
>
> I recently purchased a Collins R-388 from a US Government auction. I have
>yet to fire it up. Can I get some comments on this receiver as to performance
>vs the $150 I paid for it.

Well there was a time when an R-388 would have been considered
a real find but these days it's just another old tubed boat
anchor. Ok, if you're a collector then maybe it means something
to you but for serious stuff, it's mostly just good for short
wave broadcast listening.

For $150 is should have all the knobs, covers and hopefully a
manual. Another key indicator is the dial. If it's white then
you're really lucky, if it's yellow then it's probably old and
worn out. The last one I had did not switch bands well due to
a worn out gear train assembly - but it worked. I sold it for
something like $65.

-fred

I'll meet you on 40 meters tonight with my R-388 and ARC-5
transmitter... (often heard back in the late 60's)

--
[Fred Lloyd, AA7BQ   Fred.Lloyd@West.Sun.COM]
[Sun Microsystems,   Southwest Area Solaris Transition Manager]
[Phoenix, AZ   (602) 275-4242]

Date: 8 Jan 93 22:53:28 GMT
From: olivea!sgigate!sgi!twilight!zola!mechcad3.esd.sgi.com!glusk@ames.arpa
Subject: Collins R-388 receiver (and 51-J?)
To: info-hams@ucsd.edu

I am thinking about getting an old tube "boat anchor"
communications receiver for listening to shortwave
broadcasts.

Can anyone give me a synopsis of the differences between
the R-388 and the "civilian" versions, i.e. the Collins
51-J3 and 51-J4? I understand the 51-J4 has mechanical
filters as opposed to the (inferior?) crystal ones on the
51-J3 (and R-388?). Are there other major differences?

Also, how does their performance compare to a R-390-A?
As boat anchors go, I have heard this is the ultimate,
but I don't like the "odometer" frequency readout. Part

of the appeal of an old radio like this is to get away
from the cold precision of digital readouts.

Any information (or alternate boat anchor suggestions)
is appreciated!

Mark Glusker
Silicon Graphics (415)390-2014, glusk@esd.sgi.com

Date: Fri, 8 Jan 1993 20:34:47 GMT
From: usc!sdd.hp.com!hpscit.sc.hp.com!hplextra!hpl-opus!hpnmdla!
alanb@network.UCSD.EDU
Subject: DRAKE TR-7(A) XCVR
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, root@june.cmp.rpi.edu (J.R. Ordon) writes:

>Has anybody out there owned or used the Drake TR-7(A) xvcr???

>I'd like to know it's good and bad points & How would it compare
>in performance to rigs like the Icom 751A & Kenwood TS-830s..

Good points:

- Excellent phase noise and dynamic range. (Better than all but the
  best modern rigs.)
- Good IF filtering. Many modern rigs with fancy IF shift/passband tuning
  have degraded dynamic range close in.
- Both analog and digital dials.
- Receives down to 10 kHz or so.
- Rugged transmitter. Rated 100% duty factor with optional fan.
- Ditto the power supply.
- Easy-to-use user interface. (You don't feel like you're operating
  a computer.)
- Large plug-in boards are easy to work on. (No surface mount parts.)
- 1.8-30 MHz transmit coverage by cuting one trace on motherboard.
- Low price.

Bad points:

- Non-synthesized inner loop causes slight frequency drift on warmup.
  (Typically 100 Hz or so.)
- For the same reason, there is no keypad frequency entry.
- No memories or other microprocessor bells and whistles.
- Includes Receiver and Transmitter offset tuning. But to work split

  more than 10 kHz or so you need the optional external VFO.
- Bigger and heavier than many modern rigs. (Especially the power supply.)

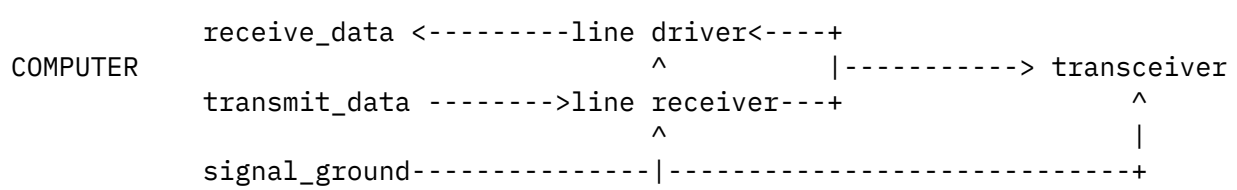
Bottom line: If you can live without the "bells and whistles" it's a
great-performing rig.

AL N1AL

Date: 8 Jan 93 22:09:08 GMT
From: eco.twg.com!twg.com!twg.com!sawyer@uunet.uu.net
Subject: ICOM 751 remote control
To: info-hams@ucsd.edu

In article <1993Jan7.082011.2187@dxcern.cern.ch> frode@dxcern.cern.ch writes:
>I have an old IC-751 that I have decided to contol from the
>RS-232 port of my PC. To do that I need the ICOM EX309
>parallel to CI-IV (parallel) interface and the UX-14 CI-IV (parallel)
>to CI-V (serial) interface plus another TTL to RS232 level
>converter. Apart from being a bit expensive, I find it a rather
>crummy solution and I have decided to brew my own interface by
>going directly from the logic board to RS232. To help me understand
>the protocol in use I would be interested in getting hold of
>the circuit diagram for the EX309 and UX-14. As far as I have
>heard the EX309 only consists of two 8bit latches and I guess the
>UX14 will contain a shift register or two to do the serializing bit.
>Any help with diagrams or other hints is very wellcome.
>
This comes up frequently. Don't even think about buying the Icom converter.
All it does is convert between RS232 voltage levels and TTL levels. You
have TTL on the Icom side; RS232 on the computer side. You can do it with
very simple (and cheap) line drivers and receivers or with an integrated
part from Maxim. The Maxim chip is probably the easier route to go because
you don't have to come up with -9V like you would with a line driver; it
runs completely off +9V (+/- a VERY large tolerance). There were circuits
for both the Kenwood and Icom interfaces in CQ Mag about a year ago--I'll
take a guess at last April, though my memory is poor. But you could do
it by just getting a RS232 line driver and line receiver from Radio Shack and
building the support circuitry from the back of the package. Take receive_
data from the serial port through the line driver and OR the TTL input with
TTL output from the RS232 line receiver; the RS232 input to this receiver comes
from the transmit_data line on the computer's serial port. The "OR"d TTL
lines then go to the center conductor of the phono connector for your
transceiver. Of course, you have to grab grounds on both the transceiver
and the serial port side. Your total cost just can't go over $10 unless you
go for gold plated connectors.

A pix is worth a K words:



Date: Fri, 8 Jan 1993 19:55:36 GMT
From: usc!cs.utexas.edu!torn!news.ccs.queensu.ca!venus!pas@network.UCSD.EDU
Subject: intermod, overload, desense?
To: info-hams@ucsd.edu

I recently installed a Diamond D130 discone antenna
for a friend's Pro-2006 and Bearcat BC760XLT scanners.
After the installation was complete, we found reception
to be much poorer with the new discone and better with
the old metal whip antennas supplied with the scanners.
What's really interesting is that the reception IMPROVES
when the Pro-2006 10dB attenuator is enabled!

After some thought and reading (including the ARRL
handbook), I suspect the receiver front-ends are
suffering from something called desensitization from
a very strong signal from the nearby university broadcast
band FM radio station. I have ordered the Grove
Scanner Filter and will try it when it arrives. I am
hoping it will notch out the FM transmission and solve
the problem. I presume that "desense" means the receiver
front end noise floor has effectively been raised to such
a high level as to bury most other signals. Is there
any way to confirm this? Has anyone experienced the same?
Comments are appreciated.

Peter

Date: 8 Jan 93 21:09:03 GMT
From: ogicse!cs.uoregon.edu!news.uoregon.edu!fp2-st-affairs-3.uoregon.edu!
user@uunet.uu.net
Subject: KH5K ... Can we get 'em?
To: info-hams@ucsd.edu

In article <1681@ncrclm.ClemsonSC.NCR.COM>,
tskelton@ncrclm.ClemsonSC.NCR.COM (Tom Skelton) wrote:

> Steve, you shouldn't have any problem at all. The expedition will
>
> probably only be able to focus on Europe and Africa for 3 to 4 hours
> per day, particularly the way the sunspots have been dropping off
> lately. By the way, be careful of which station you log. The
> Palmyra and Kingman Reef stations will be on the air simultaneously.
> Good luck to you! I need them both on 80 meters, so I'll be trying to
> get through the *Midwest Curtain* to work them. 73, Tom WB4IUX (in S. C.)
>
>
Tom:
Good luck getting through (I'd rather call it *the WALL*) the curtain to
the KH5 & KH5K. The KP5 gave us West Coasters that problem. Luckily I got
'em on 15 but no luck on any other bands.

Steve/AA7FL

Date: 8 Jan 93 19:06:05 GMT
From: news-mail-gateway@ucsd.edu
Subject: ORBS$009.2liners
To: info-hams@ucsd.edu

SB KEPS @ AMSAT $ORBS-009.N
2Line Orbital Elements 009.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT
FROM N3FKV HEWITT, TX   January 9, 1993 BID:$ORBS-009.N

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:
1 AAAAAU 00 0 0 BBBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

AO-10
1 14129U 83 58 B 92365.61164878 -.00000082 00000-0 99998-4 0 9558
2 14129 27.0174 46.9353 6015488 45.5070 350.3508 2.05880840 71796
UO-11
1 14781U 84 21 B 93006.10837104 .00000637 00000-0 11709-3 0 3933
2 14781 97.8280 39.5580 0011931 149.8893 210.2999 14.68816618472929
RS-10/11

```
1 18129U 87 54  A 93007.46099695  .00000097  00000-0  99999-4 0  5173
2 18129  82.9260 357.4082 0013113  47.7369 312.4891 13.72305268277803
AO-13
1 19216U 88 51  B 93003.98014717 -.00000288  00000-0  99999-4 0  5515
2 19216  57.4661 340.5151 7264514 305.3480   6.7015  2.09727431 34912
FO-20
1 20480U 90 13  C 93007.71700293  .00000008  00000-0  47509-4 0  4357
2 20480  99.0620 254.1158 0541753  90.0675 276.2479 12.83215823136732
AO-21
1 21087U 91  6  A 93007.53765871  .00000101  00000-0  99999-4 0  6667
2 21087  82.9429 171.7038 0036546 108.2759 252.2365 13.74506023 97379
RS-12/13
1 21089U 91  7  A 92366.19741128  .00000050  00000-0  46117-4 0  3897
2 21089  82.9223  46.7001 0028766 149.6444 210.6384 13.74010854 95457
UO-14
1 20437U 90  5  B 93007.11470579  .00000199  00000-0  85293-4 0  7081
2 20437  98.6281  93.1148 0010739 298.3306  61.6781 14.29723223154418
AO-16
1 20439U 90  5  D 92366.19348763  .00000220  00000-0  93385-4 0  5395
2 20439  98.6330  86.9988 0011296 323.5025  36.5385 14.29781564153439
DO-17
1 20440U 90  5  E 93008.24569002  .00000213  00000-0  90591-4 0  5420
2 20440  98.6313  95.1450 0010742 297.8523  62.1570 14.29916488154593
WO-18
1 20441U 90  5  F 93007.72335012  .00000189  00000-0  81280-4 0  5444
2 20441  98.6313  94.6629 0011401 299.8194  60.1852 14.29901095154527
LO-19
1 20442U 90  5  G 92366.52818016  .00000218  00000-0  92270-4 0  5400
2 20442  98.6334  87.6768 0012290 321.8267  38.2042 14.29985086153507
UO-22
1 21575U 91 50  B 93003.75719491  .00000260  00000-0  10230-3 0  2397
2 21575  98.4899  82.3963 0008533  68.5510 291.6586 14.36760212 77052
KO-23
1 22077U 92 52  B 93006.08586143 -.00000000  00000-0  99999-4 0   866
2 22077  66.0809 303.5860 0013347 229.3565 130.6278 12.86275910 18999
NOAA-9
1 15427U 84123  A 93006.04962885  .00000170  00000-0  11115-3 0  2642
2 15427  99.1233  43.2697 0014242 265.8655  94.0883 14.13472925415874
NOAA-10
1 16969U 86 73  A 93005.91748737  .00000188  00000-0  89053-4 0  1132
2 16969  98.5257  25.6861 0014382  70.3269 289.9464 14.24750724327529
MET-2/17
1 18820U 88  5  A 92364.45108268  .00000076  00000-0  62330-4 0  8471
2 18820  82.5409 333.9213 0015294 245.0335 114.9237 13.84666476248356
MET-3/2
1 19336U 88 64  A 93001.43185858  .00000012  00000-0  19475-4 0   144
2 19336  82.5430 339.9517 0017097 147.4552 212.7630 13.16953806213262
NOAA-11
```

```
1 19531U 88 89  A 93005.92486347  .00000233  00000-0  14608-3 0   173
2 19531  99.1107 338.6958 0011745 171.4267 188.7063 14.12806259220764
MET-2/18
1 19851U 89 18  A 92366.10640525  .00000092  00000-0  77127-4 0  7918
2 19851  82.5197 208.9061 0013697 286.4058  73.5591 13.84315560193934
MET-3/3
1 20305U 89 86  A 93003.82121235  .00000043  00000-0  99999-4 0  6904
2 20305  82.5506 280.8237 0014451 162.9419 197.2190 13.16007713153484
MET-2/19
1 20670U 90 57  A 92364.10052700  .00000115  00000-0  97957-4 0  5405
2 20670  82.5451 273.4690 0014650 209.3994 150.6347 13.84154199126599
FY-1/2
1 20788U 90 81  A 93006.10568040 -.00000222  00000-0 -13594-3 0  4960
2 20788  98.8791  37.0073 0015437  42.6667 317.5694 14.01276766119882
MET-2/20
1 20826U 90 86  A 92366.10840697  .00000092  00000-0  78643-4 0  5418
2 20826  82.5247 210.0947 0014183  99.0197 261.2563 13.83528971114045
MET-3/4
1 21232U 91 30  A 92364.53190465  .00000043  00000-0  99999-4 0  3439
2 21232  82.5458 187.6963 0018522  92.0273 268.2970 13.16815184 80993
NOAA-12
1 21263U 91 32  A 93005.93570646  .00000240  00000-0  12577-3 0  4699
2 21263  98.6763  38.8041 0012688 327.8228  32.2171 14.22179512 85582
MET-3/5
1 21655U 91 56  A 93001.42241666  .00000043  00000-0  99999-4 0  3916
2 21655  82.5543 132.2972 0014536  85.7663 274.5119 13.16813190 66473
MIR
1 16609U 86 17  A 93007.95444855  .00013698  00000-0  18740-3 0  8053
2 16609  51.6216 303.9505 0001555 198.3072 161.7660 15.57728269394146
HUBBLE
1 20580U 90 37  B 93007.59702766  .00001706  00000-0  14887-3 0    47
2 20580  28.4699  18.8484 0004923 157.9864 202.0908 14.92214984147508
GRO
1 21225U 91 27  B 93007.40444554  .00027164  00000-0  24819-3 0  7838
2 21225  28.4650  24.2634 0004544 100.0150 260.0976 15.66299243 99942
SARA
1 21578U 91 50  E 93007.26267271  .00000971  00000-0  33346-3 0  3971
2 21578  98.4935  86.5770 0005785  67.8926 292.2859 14.38169619 77592
UARS
1 21701U 91 63  B 92347.46089448  .00002879  00000-0  27138-3 0  2339
2 21701  56.9859 209.9343 0004469 101.6617 258.4927 14.96649416 68348
FREJA
1 22161U 92 64  A 92365.58631514  .00000284  00000-0  18456-3 0   971
2 22161  63.0059 201.9500 0769497 267.8411  83.4390 13.21543263 11273
/EX

------------------------------
```

Date: 8 Jan 93 22:40:28 GMT
From: news-mail-gateway@ucsd.edu
Subject: Origin of "88's" and "73's" ?
To: info-hams@ucsd.edu

88s? 73s? How about "best 73s?
This says "best best regardses"   :)

73
Very 73
Dube Todd   AB5AP   <dube@cpdvax.csc.ti.com>

Date: 8 Jan 93 23:13:59 GMT
From: news-mail-gateway@ucsd.edu
Subject: Packet-Radio List
To: info-hams@ucsd.edu

I bailed out of the Packet-Radio list a couple of years ago and now find the
old address doesn't work anymore. Did the list die or has it changed to some
other location? I'm getting back into packet now and am fascinated with Phil
Karn's NET and TCP/IP.

73 de N5PWP
__mike
MBeez.HoustonCSSC@Xerox.COM

Date: 8 Jan 93 18:39:48 GMT
From: news-mail-gateway@ucsd.edu
Subject: QSL status of YX0AI
To: info-hams@ucsd.edu

I spoke with Jim Talens (N3JT) this morning, and he said that the
YX0AI managers are sending out the last 800 (or so) cards this
week or next. He said that if the managers have your cards, then
they have sent the YX0AI cards to you (or they will have by the
end of next week).

A good friend of mine grew up in Venezuela. He said that the state
post office is so corrupt and unreliable that the only way to get mail
delivered in the country (especially Caracas) is to use private courier
services. Good luck.

Mike   N6MZ   mikemr@microsoft.com

Date: 8 Jan 93 11:57:55 EST
From: psinntp!pbs.org!jernandez@uunet.uu.net
Subject: Question about activity in the Washington DC area.
To: info-hams@ucsd.edu

Does anyone in the Washington, DC or Northern VA area know of
902 MHz and/or 1296 Mhz operations in the area?

Date: Fri, 8 Jan 1993 21:51:03 GMT
From: usc!zaphod.mps.ohio-state.edu!caen!umeecs!zip.eecs.umich.edu!
hideg@network.UCSD.EDU
Subject: Ringo Ranger II performance
To: info-hams@ucsd.edu

In article <1993Jan8.161743.11713@ke4zv.uucp> gary@ke4zv.uucp (Gary Coffman)
writes:

>That gain figure is compared to an *isotropic* source. Subtract 2.14 db
>to get gain over a vertical dipole. Nearly 5 db is really still too much
>gain for this antenna. A realistic figure compared to a vertical dipole
>would be 3 db. If you want a good gain antenna for base use, look at the
>Comets and Diamonds. They have more gain, at least the bigger ones, and
>they are mechanically more rugged...

Diamonds are more rugged, eh?

I'm using an X-500 for a UHF repeater, and a friend has one at home. Both
of these antennas have had major water leakage problems.

I sent mine back to RF Components (or whatever their name is), and they found
nothing wrong with it.

We have since crammed each joint on both antennas with sealant. When we
tightened the collars, sealant goop oozed out of them.

My friend took off work early this evening to take his X-500 down because
it has apparently "sprung a leak" again.

Anyway, just a friendly warning.

73

--Steve

____
Steve Hideg N8HSC

hideg@amadeus.erim.org

Date: 8 Jan 93 20:19:56 GMT
From: news-mail-gateway@ucsd.edu
Subject: What Happened to the LIST?
To: info-hams@ucsd.edu

I have not received a copy of INFO-HAMS for almost a month now.
What Happened to it? Did the creation of the new list cause this
one to stop or what?

I WANT MY INFO-HAMS!!!!!!

Tim Wright KD4OVM
WRIGHT@morekypr.BITNET

Date: Fri, 8 Jan 1993 19:54:00 GMT
From: usc!zaphod.mps.ohio-state.edu!menudo.uh.edu!sugar!jreese@network.UCSD.EDU
To: info-hams@ucsd.edu

References <1idghsINN1pa@transfer.stratus.com>, <8355@lib.tmc.edu>,
<1ifo38INNqah@transfer.stratus.com>
Subject : Re: Closed repeaters

In article <1ifo38INNqah@transfer.stratus.com> leadfoot@bigbootay.sw.stratus.com
(Mark Curtis) writes:
>Require PL/CTCSS on all machines, TX and RX, on 144, 220, and 440.
>Add a warning that 10, 6, 900, and 1280 machines may in the future
>require the same. Allow multiple repeaters on these low usage closed
>pairs. If they scream, tough, the coordinator never owned the frequencies
>anyway. Only coordinate high level/high power repeaters if they agree
>to allow ANY user to use the basic repeat function of the machine.

...and you REALLY think any democratic coordinating group could pull this
off? GET A LIFE!

You're living in a dream world. WAKE UP! This is REALITY! How about a
real, workable solution...I don't think you, or anyone else, can come up
with a plan that is fair for both the repeater owners and repeater users.

Coordination groups have been fighting this battle for years. None of them

have developed a fair way to accomplish this task. I'm not saying it can't be done, but some consideration of the people who own the existing repeaters is in order here. They have a vote too, remember.

--
     Jim Reese, WD5IYT | "Real Texans never refer to trouble
  jreese@sugar.neosoft.com | as deep doo-doo" --Molly Ivins

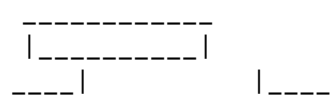
Date: Fri, 8 Jan 1993 20:09:26 GMT
From: usc!wupost!monsanto.com!bb1t.monsanto.com!sekell@network.UCSD.EDU
To: info-hams@ucsd.edu

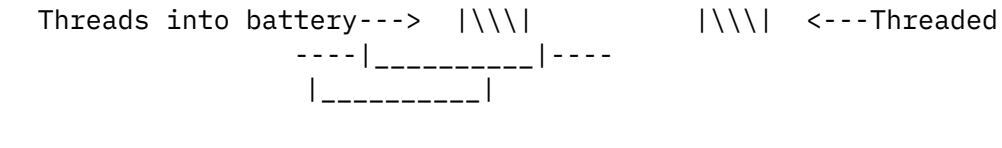
References <1993Jan03.232623.4498@uhura.neoucom.edu>, <13412@bnr-rsc.UUCP>, <1993Jan8.154915.11579@ke4zv.uucp>
Subject : Re: RFI susceptability of new cars?

In article <1993Jan8.154915.11579@ke4zv.uucp>, gary@ke4zv.uucp (Gary Coffman) writes:
> In article <13412@bnr-rsc.UUCP> everett@nmerh97.NoSubdomain.NoDomain (Jerry F. Everett) writes:
>>My RFI susceptability is so bad I took the rig out of my GM car....Read on!!
>>
>>Config: DC is taken from the fuse panel. (I know it should be on the battery
>>but it is really tough to attach the leads to the battery Terminals)
>
> Ok, fourth and fifth mistakes. You should take power from the battery,
> *both* leads. You can do this on a GM side post battery by using ring
> terminals under the heads of the connecting bolts.

    For the screw terminal (non-post) batteries, I found a special bolt
    that replaces the standard one on the battery cables. It is made of
    brass and has ~1" hex body that allows you to tighten it to the battery.
    On the back it is threaded and comes with a nut. This allows you to
    install and remove power connections without losing power to the
    clock, radio memories, ECM, etc. It was cheap, and available at K-Mart.
    I think you might also find something like this where hi-perf car audio
    systems are sold, but it may cost $$$.

    (Attempt at ASCII representation follows...)





> GM says to route coax to the
> rear of the vehicle through the wiring channel under the molding strip at
> the bottom of the driver side door. Avoid the passenger side kick panel,
>

Thats where I routed my coax and power for my GM cars. Works great!

Scott Keller +1 314 537 6317 The Agricultural Group of Monsanto Company
sekell@bb1t.monsanto.com KA0WCH packet: ka0wch@k0pfx.mo.usa.na

---

End of Info-Hams Digest V93 #40
****